



SAINT JOHN

Final Draft Report

City of Saint John Transportation Strategic Plan Phase 3

Cycling Strategy

Movesj



Prepared for City of Saint John
by IBI Group
With Crandall Engineering
October 29, 2019

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1 Existing Conditions

1.1 Trails & Cycling Infrastructure

The City of Saint John's cycling network currently consists of 12 km of bike lanes and 34 km of shared lanes. Progress has been made in recent years to expand the City's cycling network, as the City has implemented recommendations and policies from PlanSJ, the City's Municipal Plan, and the 2010 Trails and Bikeways Strategic Plan, both of which emphasized a need for expanded cycling infrastructure. On-road facilities are being implemented alongside infrastructure renewal projects such as "road diets" on select four-lane corridors.

The Campus Harbour Connection was recently completed by the City, connecting the UNB Saint John Campus and Saint John Regional Hospital area in Millidgeville to the Uptown. This route had been identified as a top priority in the Trails and Bikeways Strategic Plan. This 4.5 km long, north-south bike route consists of dedicated bike lanes or shared-use lanes along University Avenue, Millidge Avenue, Somerset Street, Churchill Boulevard, Visart Street, Adelaide Street, Metcalf Street and Simonds Street to connect with Harbour Passage. Harbour Passage features over 3 km of multi-use pathways winding along the harbourfront from Bentley Street to the south end of Prince William Street. There are future plans to expand Harbour Passage along the outer edge of the Central Peninsula, and potentially north to Rockwood Park as well. This connection from UNB to the Harbour Passage represents the first comprehensive bike route in the City, connecting two major employment areas.

The Great Trail, previously known as the Trans-Canada Trail, also passes through Saint John and is part of a 24,000 km network of trails across Canada. Cycling is intended to be the primary transportation mode along the 27 km section of trail in Saint John that consists of 5 km of dedicated bike lanes, 16 km of shared-use lanes, and 6 km of off-road trails.

In addition to the Campus Harbour Connection and the Great Trail, designated on-road bicycle facilities can be found on sections of Manawagonish Road, Manchester Avenue, Douglas Avenue, Bentley Street, Westfield Road, and Rothesay Road.

Apart from the corridors noted above, off-road cycling trails for commuters are limited in the City. Urban trail construction is challenging in Saint John due to limited right-of-way, topography, and the haphazard patchwork of property boundaries throughout the City. However, there are a series of recreational trails in Rockwood Park, many of which are suitable for cycling. The best opportunities for future multi-use trails are likely along established roadway corridors where street widths can be reduced and roadside areas reallocated to trails and/or dedicated cycling infrastructure. The City's standard cross-section for a roadside multi-use trail consists of a 4.0m wide concrete surfaced trail with a 2.0 m to 5.0 m boulevard.

1.2 Previous Plans

The following planning and policy documents provide support for cycling, as well as identifying network connections to be considered in this strategy.

1.2.1 PlanSJ Municipal Plan (2011)

The City's 2011 PlanSJ Municipal Plan includes active transportation policies that largely reflects the key recommendations outlined in the 2010 Trails and Bikeways Strategic Plan. It stresses the need to reduce reliance on automobile travel, and recommends several policies to promote modes of sustainable transportation, including cycling.



1.2.2 Trails and Bikeways Strategic Plan (2010)

A Trails and Bikeways Strategic Plan for the City of Saint John was prepared in 2010. The Trails and Bikeways Plan provides recommendation on linking the City's sidewalks, bikeways and trails to create a comprehensive trails and bikeways network to promote active transportation within the City. This Plan outlines a "transportation network of trails and interlinking corridors" that creates a central spine or active transportation corridor through the city, connecting one end of the city to the other.

Goals, Objectives and Principles

The long-term goal of the Trails and Bikeways Strategic Plan is to promote a sustainable and healthy lifestyle by providing opportunities for active lifestyles and mobility options for all of the City's residents.

The Trail and Bikeways Plan serves three key objectives:

1. To identify key recreational and active transportation and corridors;
2. To provide recommendations for implementation and development of the Saint John trails and bikeway network; and
3. To provide direct input into the development of the Saint John Municipal Plan process underway at that time.

The Trails and Bikeways Plan is guided by four guiding principles:

1. Safety
2. Accessibility
3. Connectivity and Walkability; and
4. Aesthetics.

The Planned Network

According to the 2010 Plan, the corridors in the City's Trails and Bikeway network were developed through an analysis of the existing network of active transportation infrastructure, trails, roadways and destinations within the City.

The 183 km network was classified into neighbourhood routes, community routes, citywide corridors and recreational loops that use existing and proposed trails and links to create a comprehensive connectivity web for all of Saint John.

An overview of the different classifications is provided in Exhibit 1.1.

Exhibit 1.1: Trails and Blkeways Strategic Plan Route Classifications

ROUTE CLASSIFICATION	DESCRIPTION	TOTAL DISTANCE
Citywide Corridor	Intended to provide a central spine for active modes of transportation from one end of the city to the other.	37 km
Community Routes	Intended to provide connections from neighbourhoods to key destinations and to the rest of the connectivity network.	29 km
Neighbourhood Routes	Intended to promote a healthy and active lifestyle and to provide the opportunity for residents to move around their neighbourhood without a motorized vehicle.	68 km
Recreational Loops	Intended to identify potential riding loops for recreational and sport riders.	49 km

This analysis was supplemented with feedback from community stakeholders and residents, which was incorporated into the development of the routes. The result was the Bikeways and Trails Strategic Plan shown in Exhibit 1.2.

Programming and Policy Recommendations

The plan recommended the development of a comprehensive trails master plan. There are many local trail systems in Saint John, and they play a large role in the active living of nearby neighbourhoods. Specific trail destinations highlighted in the report include:

Rockwood Park	Little River Reservoir	Shamrock Park
Blueberry Hill	Seaside Park	Dominion Park
Mispec Park	Tucker Park	Irving Nature Park

Since the university and the hospital are one of the largest single concentrations of employment in Saint John, it was recommended that a trail/corridor be located to link the proposed University Avenue community route north to the hospital and university, also creating a link to the north-end of Rockwood Park (recently completed as the Campus Harbour Connection).

It was also recommended that to foster partnerships to develop the Marsh Line trail, as the proposed trail has been identified as a long term city-wide corridor project. This corridor would provide an essential off road spine to the entire Trails and Bikeways network, providing key access to residential and commercial areas while also providing an excellent off road system for all levels of network users.

Other administrative recommendations are made in the 2010 Plan, including the formation of an active transportation advisory committee, bikeway corridor implementation, capital budgeting, policy integration into the Municipal Development Plan and other City planning processes, parkland dedication for linear facilities, review of active transportation-related bylaws. Further recommendations were also made regarding network development, community education, and operations and maintenance.

The 2010 Plan outlines a “transportation network of trails and interlinking corridors” that creates a central spine or active transportation corridor through the city, connecting one end of the city to the other. However, because it was created prior to the completion of the 2011 Municipal Plan, the Trails and Bikeways Strategic Plan did not have the benefit of the goals and direction of the Municipal Plan, and therefore, does not fully align with those goals and direction.¹

1.2.3 PlaySJ: Park & Recreation Strategic Plan (2012)

The PlaySJ Strategic Plan outlines the City’s plan to provide high-quality recreational opportunities to its residents. The cycling components of the City’s PlaySJ largely reflect the recommended trails projects in the City’s 2010 Trails and Bikeways Strategic Plan shown on Exhibit 1.2. The study recommends the following associated actions:

- Invest in Rockwood Park and build out to create a regional recreation hub. Expand the trails taking into consideration trail cycling as a popular sport in the Park.
- Participate in regional trail and AT initiatives;
- Add AT routes including Harbour Passage, Rockwood Park to Uptown, Irving Nature Park and Sheldon Point Hiking Trail, and Little River Reservoir Trails;
- Assist in development of safe routes to schools, prioritizing safe access for children who are walking and cycling over vehicle access
- Coordinate with the City’s Traffic Calming Policy

¹ PlaySJ Parks & Recreation Strategic Plan, City of Saint John, 2012
October 29, 2019

The plan also notes that the cycling facilities on Bentley Street, Douglas Avenue, Manawagonish Road, and Churchill Boulevard need to be expanded and are the beginnings of a connected cycling network, providing crucial links between neighbourhoods.

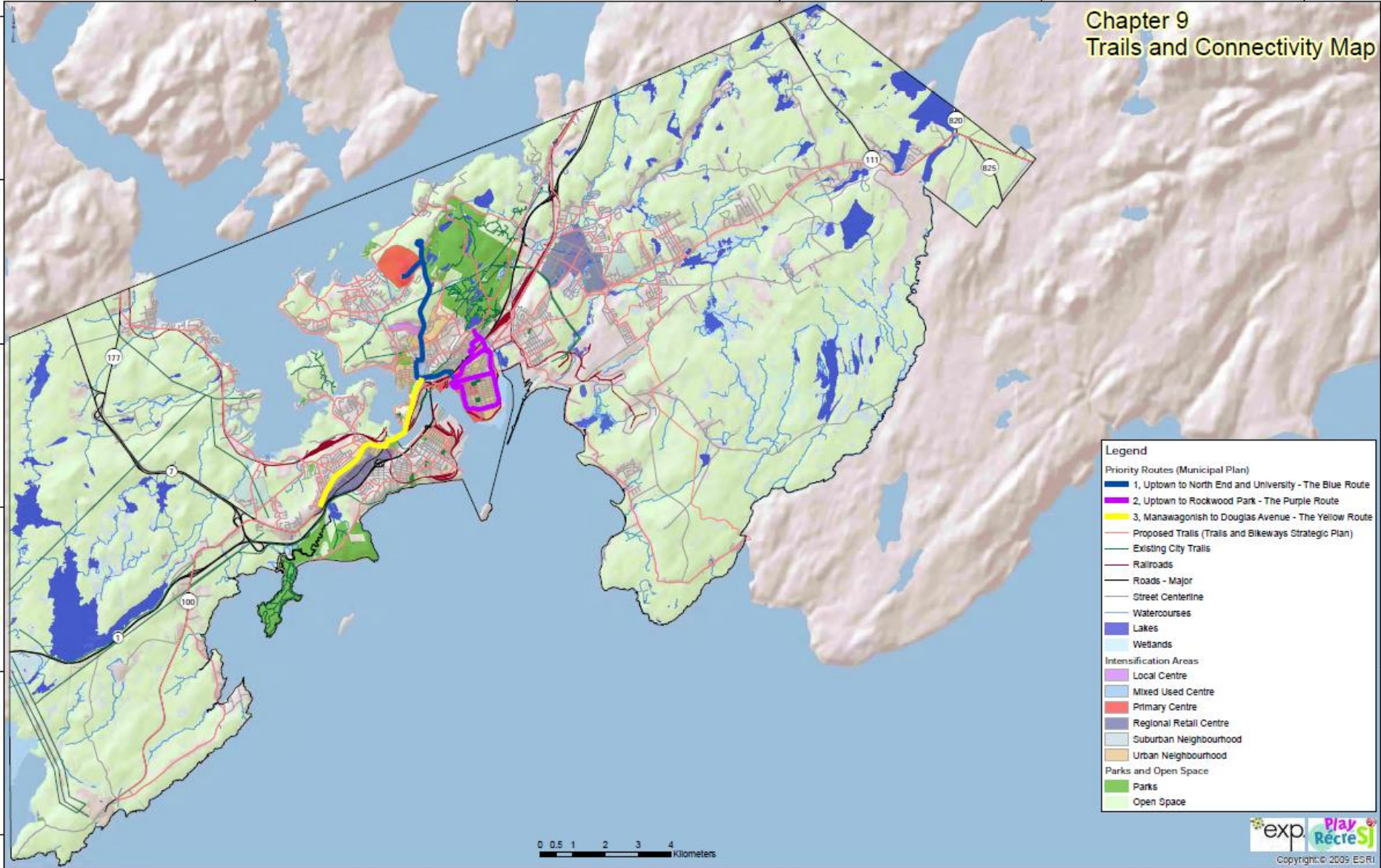
1.2.4 Bike Parking Plan for the Uptown of Saint John (2009)

The Bike Parking Plan for Uptown Saint John reviewed current bicycle parking facilities in Uptown and suggested the introduction of new parking facilities to meet the current and future needs of cyclists.

The study estimated there were 68 utility cyclists travelling to Uptown at the time of the study. There was also parking for 121 bicycles, but many of these spaces were not aligned with modern best practices, being poorly designed, located in unsafe, poorly lit places, or not located close to key areas of employment.

A phased approach was recommended to provide new bike parking. In Phase 1, which was to take place in 2009, the Canada Games Aquatic Centre was highlighted as a priority site for both short and long-term parking due to its convenient location near bike routes and employment areas. Phase 2, to take place from 2010-2013, was dependent on the usage of the bike storage facilities implemented in Phase 1. The Carleton Street Parking Garage was identified as a key long-term bike parking facility due to its proximity to high-density employment. Overall, the study proposed 121 to 131 new short-term bicycle storage spaces and 38 long-term spaces to be implemented in Uptown Saint John. The proposed number of parking spaces would satisfy cyclist demand based on a 0.6% bike participation rate in the year 2013, double the 0.3% participation rate from the 2006 Census.

Exhibit 1.3: PlaySJ Trails and Connectivity Map



1.2.5 Central Peninsula Secondary Plan (2018)

The City's neighbourhood plan for the Central Peninsula area builds upon recommendations set forth in PlanSJ, the City's Municipal Plan, at a more detailed level. The Central Peninsula is the historic centre of Saint John, and although it went through long periods of population decline, it is undergoing a revitalization, asserting itself as the cultural centre of the City. The Secondary Plan sets forth policies and recommendations to continue this positive momentum, and help create a vibrant core for the City.

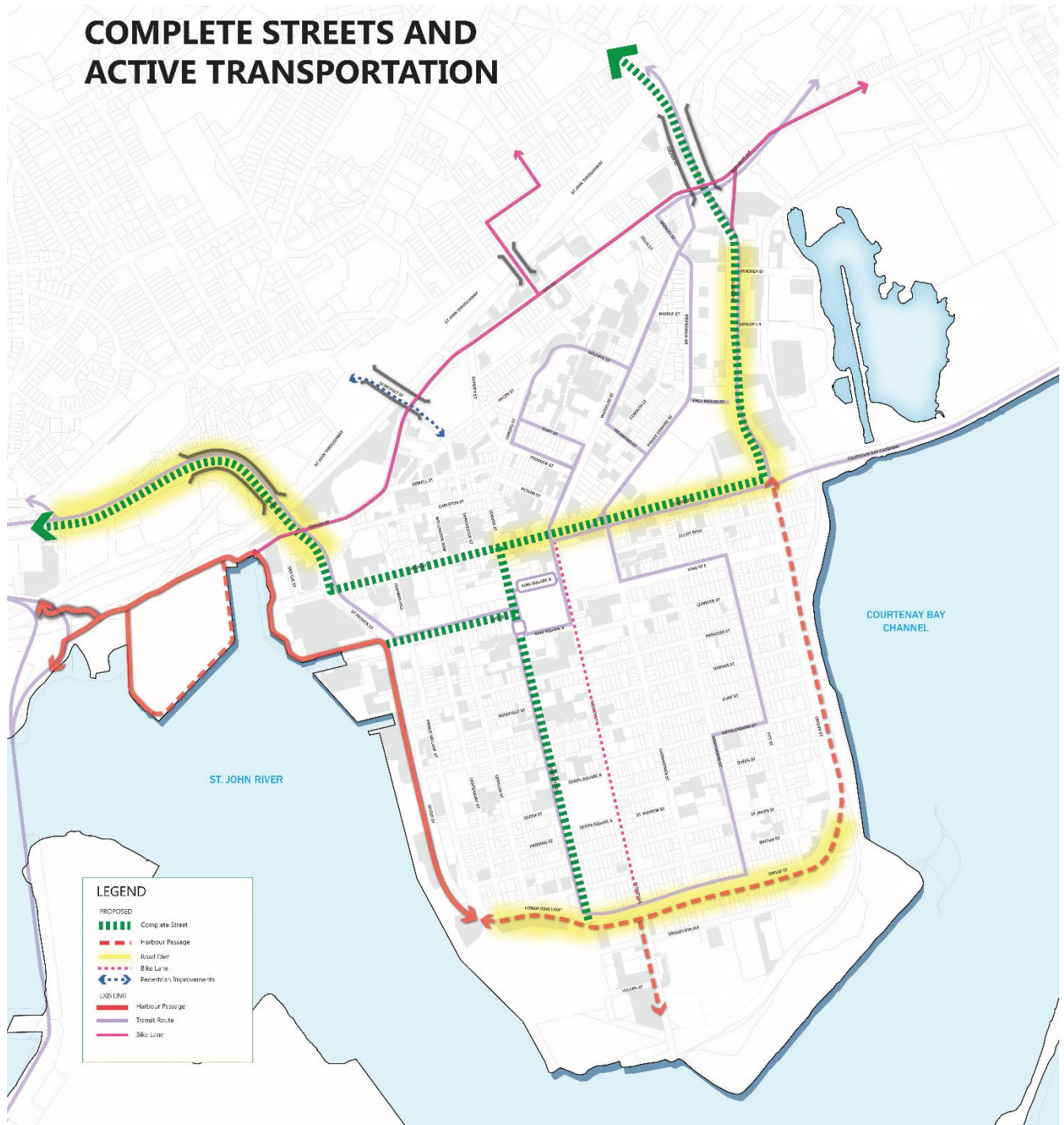
The Secondary Plan recognizes the need to support sustainable modes of transportation, including cycling. It notes that the public realm should "encourage walking and cycling as both recreational activities and modes of transportation". A map, including the proposed cycling improvements, of the Central Peninsula, is presented in Exhibit 1.4. The plan also recommends evaluating opportunities to undertake "road diets" and infrastructure enhancements for the following public streets:

- Union Street
- Broad Street
- Water Street
- Crown Street

Connecting the Harbour Passage, a popular off-road multi-use path, around the Peninsula to Rockwood Park was identified as a high priority project. The plan also recognizes that Main Street, Somerset Street, Crown Street, and the Courtenay Bay Causeway, which are the main connections into the Central Peninsula, are unfriendly to cyclists and act as barriers preventing entry into the neighbourhood.

Exhibit 1.4: Central Peninsula Complete Streets and Active Transportation Plan

COMPLETE STREETS AND ACTIVE TRANSPORTATION



1.2.6 New Brunswick Trails Action Plan (2018)

Eleven signature trails were identified as part of the province's Trails Action Plan with the intent of developing these trails to be tourist hotspots. The Greenway Trail was identified as a signature trail in the Plan. Signature trails are intended to be developed to be major tourist attractions with international appeal and to promote economic growth through tourism spending

The International East Coast Greenway Trail was identified as a signature multi-use trail. This proposed trail will stretch along the coast of New Brunswick from Saint John to the US border at St. Stephen, connecting the nationwide Great Trail (previously known as the Trans-Canada Trail) to the East Coast Greenway in the USA.

1.2.7 Coastal Link Trail Feasibility Study (2019)

The Coastal Link Trail, also referred to as the International East Coast, will connect the Great Trail in Saint John to the American East Coast Greenway Trail at the international border in St. Stephen. This connection would create the world's longest continuous linear trail.

The trail will enter Saint John from the west through the existing Spruce Lake Trail. At the end of the Spruce Lake Trail, the Coastal Link Trail will continue westward along Ocean Westway and Manawagonish Road before connecting to the Great Trail at Manchester Avenue. Short term developments include trailhead construction at Rockwood Park and Uptown Saint John, as well improvements of the Spruce Lake Trail. Longer-term opportunities include the expansion of the Lorneville Loop and the Shoreline Trail in west Saint John and a trail connection at Rothesay Avenue.

A map of the eastern end of the trail, in Saint John, is provided in Exhibit 1.5.

The study notes the high potential of cycling tourism. Nearby provinces such as Quebec and Nova Scotia have both implemented province-wide cycling networks and seen growth in cycling tourism. In New Brunswick, cyclists spend more than other greenway trail users, with visiting cyclists spending \$130.05 per visit. A bicycle rack program is also recommended to encourage the installation of bicycle parking at key locations along the trail.

Exhibit 1.5: Coastal Link Trail Saint John Map



1.3 Existing City Policies, Practices & Programs

The following two organizations undertake a number of initiatives to support and promote cycling in Saint John:

- **Saint John Cycling:** a cycling advocacy organization founded in 2011 with the goal of supporting growth of all aspects of cycling in Saint John and the surrounding communities. They have organized and hosted group rides for cyclists of all ages and abilities.
- **Crescent Valley Resource Centre:** a neighbourhood-based hub serving the residents of Crescent Valley. The Centre offers free programming and services aimed at building leadership and resiliency in individuals and families, and promoting healthy and active lifestyles. Cycling-related programs include:
 - **Refurbished bike program** – the Centre repairs donated bikes and gives them to families in priority neighbourhoods to help overcome the financial barriers that some may face to start cycling. As of July 2019, approximately 500 bikes and helmets have been donated to individuals and families;
 - **Tuesday Tune Ups** – residents can drop in and work on their own bike and receive advice from volunteer experts. They can also lend a hand repairing donated bikes;

- **Earn-a-Bike** – geared to teens who need a bike. The program allows individuals to “earn” a bike by volunteering their time. To earn a bike, they pick a donated bike they want, repair it, and volunteer some time helping repair other donated bikes; and,
- **Trike Club** – residents can borrow an adult tricycle to go shopping or for recreational uses. They can also borrow a bike trailer which can accommodate two smaller children or groceries.

1.4 Barriers to Cycling

The 2010 Trails and Bikeways Strategic Plan identified key bottlenecks in the proposed network which present barriers to the successful implementation of the trails and bikeways network. These bottlenecks, listed below, severely limit opportunities to expand the cycling network and should be candidate projects to focus on in the network improvement plan.

- **Rothesay Avenue** – Rothesay Avenue was proposed as an ideal east-west Citywide Corridor, linking east Saint John to the rest of the network; however, Rothesay Avenue is a four lane corridor serving high traffic volumes and with little to no space for addition of bike lanes or a multi-use trail within the public ROW. A road diet for Rothesay Avenue has been proposed as a possible solution, reducing the street from four lanes to three lanes with bike lanes. Traffic volumes on Rothesay Avenue have dropped following opening of the One Mile House interchange, but still remain at or above 20,000 vehicles per day which is a common upper threshold for a road diet. This issue requires further investigation to determine feasibility. Traffic modeling in further phases of MoveSJ will provide more accurate long term volume projections.
- **Marco Polo Bridge Connection to Rothesay Avenue** – This bridge was identified as a major barrier to cyclists due to its limited width.
- **Reversing Falls Bridge** – This bridge does not currently have dedicated cycling facilities, and therefore is a barrier to connecting the west side with the rest of the City. Although shared bike lanes are being added, it would ultimately be desirable to have dedicated facilities for cyclists with physical separation from motorized traffic.
- **Courtenay Bay Causeway** – Traffic speeds were identified as the greatest issue along the Causeway. It was recommended that the Causeway be further studied for strategies to slow traffic and to integrate separated bike lanes by creating raised bike lanes on both sides of the roadway. A multi-use pathway on one side of the Causeway may also be an option.
- **Main Street Viaduct** – The Plan proposed the Main Street Viaduct as the long term route from the North End into the Uptown Core; however, the corridor has a six-lane cross-section with no space

available for cyclists and features several on/off-ramp conflict zones. Traffic volumes do not appear to warrant the 6-lanes. It was proposed that the corridor be reduced to four traffic lanes and the remaining space be utilized as a multi-use trail/linear greenway. The Main Street corridor from Chesley Drive to Union Street needs to be reviewed in terms of lane reductions and dedicating more space to pedestrians and cyclists. The City's South Central Peninsula Neighbourhood Plan includes a proposed road diet on Main Street North. Details of this road diet such as number of traffic lanes and specific treatments along the street need to be reviewed in more detail, including long term opportunities using the City's pending travel demand forecasting model.

- Route 1 Throughway – Route 1 bisects the City and separates north end neighbourhoods from the South Central Peninsula. Crossings are limited to the Main Street Viaduct, Somerset Street, Crown Street and a pedestrian overpass at Stanley Street. It is desirable to improve the accessibility and connectivity of these crossings to be more attractive to cyclists and to better connect to the northern and southern neighbourhoods. This should be considered in any required upgrades or replacement of this infrastructure.

2 Policy Directions

Developing and integrating key policies in the City's regulatory framework is an important part of the overall cycling strategy. The policy direction entails three major approaches: supporting cycling through integration with Complete Streets, including cycling considerations in Transportation Impact Studies and the provision of end of trip facilities.

2.1 Complete Streets

"Complete Streets" are designed, operated and maintained to enable safe access for all users. Pedestrians, cyclists, transit riders and motorists of all ages and abilities must be able to safely move along and across a complete street.

Recommendations for drafting and adopting a Complete Streets policy were included in Phase 1 of the Study. As part of Phase 2, further recommendations were made to adopt a Complete Streets policy to improve the consideration of pedestrians in the road design process.

Complete Streets can also play a pivotal role in supporting improved cycling infrastructure through the adoption of a design process that explicitly considers the needs of cyclists (and all other road users). A Complete Streets approach requires a change in policies and practices to ensure that the entire public road right-of-way is routinely planned, designed, constructed, operated and maintained to enable safe access for all users that are appropriate for local context and needs. A Complete Streets policy can help support improved cycling infrastructure through:

- Integrating principles of Complete Streets into all transportation projects except where cyclists (and pedestrians) are prohibited by law, or where there is a demonstrated absence of need;
- Applying a network approach, in conjunction with the recommended cycling network, to build a cohesive and connective network of safe, comfortable facilities;
- Ensuring that cyclists needs are accounted for during the planning and design phases of every road project (new, reconstruction, retrofit and resurfacing); and
- Improving operations and maintenance approaches that maintain cyclist access and mobility during construction activities and increase snow clearing, debris removal, etc.

2.2 End of Trip Facilities

The Bike Parking Plan for the Uptown of Saint John was prepared in 2009. It recommended criteria and standards for bike parking, strategic locations for short- and long-term parking through 2013 and recommendations for monitoring,

administration and communications. Strategy recommendations that have not been implemented should continue to be pursued, including, but not limited to:

- That an Active Transportation / Cycling Web Site be established and provide the community an opportunity to continue sharing experiences and ideas, the results of which can be provided to appropriate departments for planning purposes; and
- Update the Bike Rack Inventory and map on an annual basis and include on the Active Transportation and Cycling website.

The Parking Strategy developed in Phase 2 of the City of Saint John Transportation Strategic Plan examined bicycle parking in Saint John, including a review of the Bike Parking Plan for the Uptown of Saint John (2009) and current bicycle parking requirements in the City's zoning by-law. The review considered practices in peer cities, industry best practices and the multi-modal goals of the Strategic Plan. It also examined potential TDM strategies. The following recommendations were made:

- Un-coupling bicycle parking minimums from vehicle parking rates for non-residential uses and adopting requirements based on gross floor area;
- Increasing residential bicycle parking requirements;
- Providing sufficient bicycle parking opportunities near major destinations throughout the City as a whole;
- Including covered and/or weather protected racks;
- Incorporating a zoning by-law requirement for long-term parking for land uses such as Offices, Apartment Buildings, Hospitals and Major Transit Station; and
- Offering incentives to businesses that install cyclist showers and change facilities in large employment developments and installing them at all major City worksites.

In addition to these actions, it is recommended that the City consider the following:

- Offering Bike Valet programs at major events (refer to Action 11 in Section 4.3)
- Investigate partnership opportunities with local businesses who request bicycle parking near their locations. The partnership could take the form of financial contributions or simply through providing best practices information about how / where to install bike parking and identifying suppliers;
- Develop policies to ensure bicycle parking is cleared of snow through partnerships or incentives with business owners, etc.; and

- Investigate opportunities to provide repair stands in strategic locations.

3 Network Strategy

3.1 Network Review

As part of the development of the Cycling Strategy development, several network updates were completed:

- Undertaking a high-level cycling impact analysis to identify areas of highest potential across the City (refer to Section 3.2);
- Reviewing the previously identified priority routes and overall cycling and trails network plan to confirm priority corridors (refer to Section 3.3); and
- Reviewing the existing Trans-Canada Trail route to identify corridors to be upgraded, including implementation strategies to address deficiencies (refer to Section 3.4).

The following sections provide an overview of each aspect of the updated cycling network strategy.

3.2 Cycling Impact Analysis

To inform network selection and help to provide justification for the proposed cycling network, a GIS-based impact analysis tool was employed using ArcGIS. This analysis provides a useful methodology for evaluating and comparing potential corridors to include within the cycling network.

The list of criteria used is presented below in Exhibit 3.1.

Exhibit 3.1: Infill Analysis Tool for Evaluating Cycling Impact

Criterion	Rationale & Approach	Maximum Score
Connectivity	<p>A primary goal of the network is to help to connect existing and planned pieces of cycling infrastructure in order to improve the usability of standalone links and to provide a connected network that encourages cycling for transportation purposes. To evaluate connectivity, the number of links that connect on either end of an infill corridor or midway through the link are calculated and used to determine its rating for the criteria. A link scores differently for connecting to different types of facilities (i.e. existing versus planned) since existing facilities are already in place (less uncertainty around project phasing) and already have established users (expanded reach of network). Points are assigned as follows:</p> <p>Number of Connections:</p> <ul style="list-style-type: none"> • 0 Existing Connections = 0 pts • 1-2 Existing Connection = 5 pts • >2 Existing Connections = 15 pts <p>Length of Connections:</p> <ul style="list-style-type: none"> • <1km Total Connection Length = 0 pts • 1-5km Total Connection Length = 5 pts • 5km-10km Total Connection Length = 8 pts • >10m Total Connection Length = 10 pts <p>Segment fills a gap = 5 pts Segment connects to Trans-Canada Trail / Coastal Link= 5 pts</p>	35 pts
Population & Employment Density	<p>Population and employment density can support additional active transportation trips. Areas of higher population and employment density often have built form and land use patterns that support active transportation. In other cases, they may represent strategic locations for investment in multi-modal connections due to their trip generation potential i.e. major employment areas. The following points are assigned based on density thresholds within a 500m buffer of a segment:</p> <ul style="list-style-type: none"> • <5 people +jobs /ha = 0 pts • 5 – 15 people + jobs / ha = 10 pts • 15 – 50 people + jobs / ha = 20 pts • >50 people + jobs /ha = 35 pts 	35 pts
Key Destinations	<p>Major trip generators such as schools, and recreation/community centres should be accessible by active transportation so that residents have options when accessing essential services. Each destination is assigned 5 pts, up to a maximum of 30 pts. Certain destinations are weighted heavier (10 pts for schools and transit connection points). Selection based on 500m buffer of segment. Destinations analyzed include:</p> <ul style="list-style-type: none"> • Educational Institutions - Schools, Post-Secondary Institutions • Recreation Facilities - Pools, skateparks, playgrounds, gymnasiums, athletic fields, tennis courts, arenas • Community Destinations – Shopping Centres, libraries, hospitals, convention centre, community centres, City facilities, places of worship, transit connection points 	30 pts
Total		100 pts

The analysis identified the most cycling potential within Uptown Saint John and the areas immediately adjacent to the core, suggesting that a strategy of concentrated investment focused around the core of the City would provide the greatest return on investment. A map illustrating the results of the Cycling Impact Analysis is included in **Appendix A – Map 1**.

3.3 Priority Corridors

Network Review and Selection

As noted in Section 1.2, the City’s primary cycling network plan is the 2010 Trails and Bikeways Strategic Plan. The plan identifies numerous priority corridors, approaching network development from a Citywide perspective. However, this approach presents some challenges to implementation as it involves numerous stretches of lengthy infrastructure spanning the full City limits. In an effort to focus investment where it matters most, a priority review was completed with the idea of developing a “hub and spoke” network – made up of a main “hub” destination (Uptown Saint John) and a series of important employment and commercial centres (such as the Saint John Regional Hospital / University of New Brunswick Saint John area) or residential neighbourhoods as “spokes”, connected by cycling facilities that form priority corridors. This approach to network development draws on the findings of the Cycling Impact Analysis, and also considers a core 5-km cycling distance as a target for investment.

In addition to shifting the priorities for implementation, this cycling plan update incorporates recent and emerging network considerations, including:

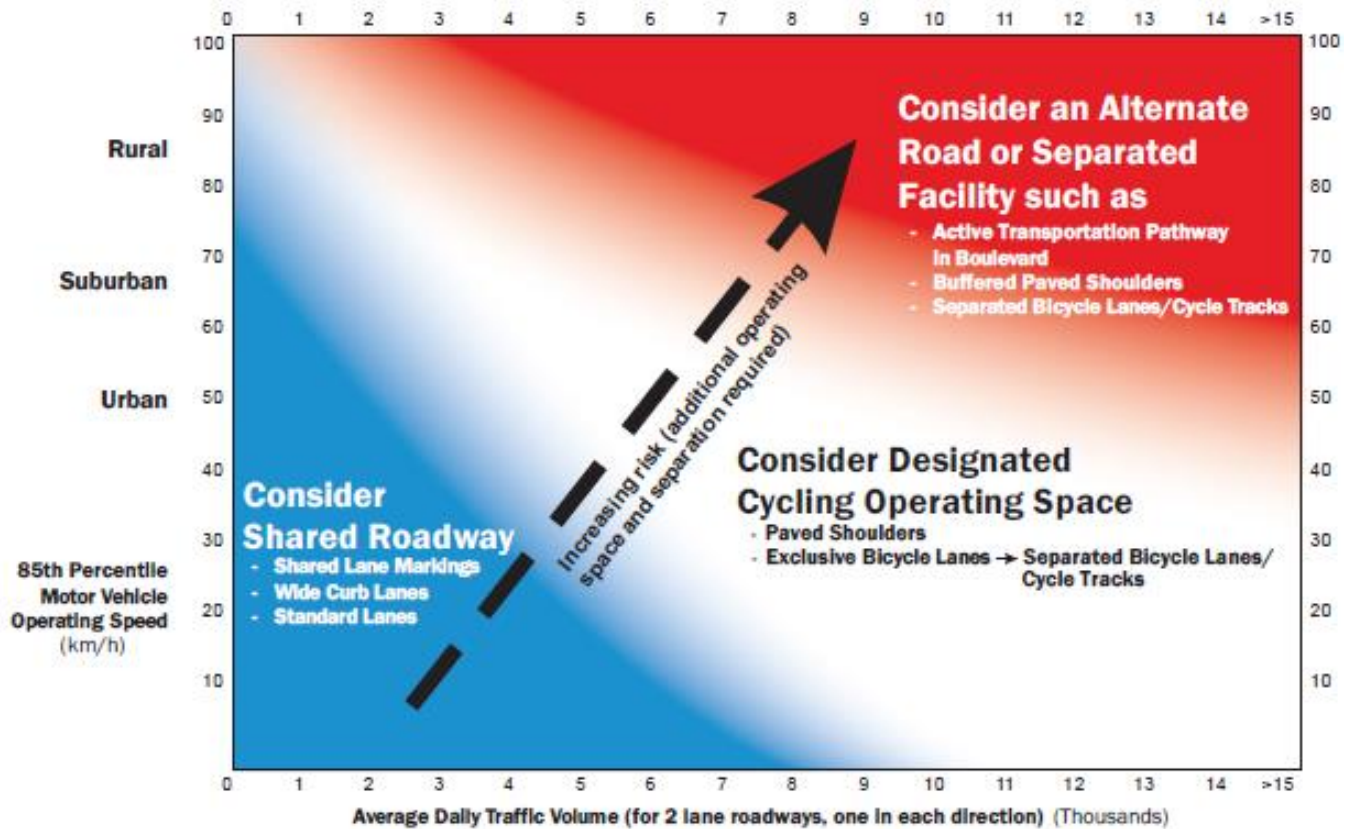
- Findings and recommendations from the Central Peninsula Neighbourhood Action Plan such as new cycling network links (e.g. Syndey Street & Charlotte Street);
- Coastal Link Trail Routing & Feasibility Study, which identifies a plan for a Regionally-significant trails facility; and
- TMP-related road & transit network considerations.

The resulting priority network includes many of the core links in the 2010 plan but includes some new links that were identified to address existing gaps, improve connectivity or create a more intuitive connection between the “hub” and “spokes” of the network.

Feasibility Review

To inform the network feasibility review, a cycling facility selection analysis was completed to identify the class of cycling facility that is warranted along each corridor: shared, designated or separated. The review was based on applying the first step of the Ontario Traffic Manual (OTM) Book 18 Facility Selection Process, the pre-selection nomograph (shown in Exhibit 3.2). The selection analysis looked beyond existing conditions and considered projected 2041 roadway volumes and speeds estimated from the transportation model. .

Exhibit 3.2: Cycling Facility Pre-Selection Nomograph



Source: OTM Book 18 (2013), p. 30

Once the class of cycling facility was identified through the use of the pre-selection nomograph, a more detailed feasibility review was completed to identify a specific implementation strategy and facility type for the cycling facility to meet or exceed the pre-screening class. The assigned facility class based on the nomograph represents the minimum desirable facility class, i.e. if a designated facility is indicated by the pre-selection process, then the implementation strategy would consider providing designated or separated facilities. Instances where the decision may be made to provide a higher-order cycling facility include routes that serve school-aged children or routes that provide access to an important community destination such as a school, hospital, community centre or major retail centre. The cycling facility class may also be upgraded at the time of implementation if the future roadway context has changed significantly from what is currently anticipated in this review process.

An overview of different facility type and classes considered in the review is shown in Exhibit 3.3.

Exhibit 3.3: Overview of Cycling Facility Classes & Types

FACILITY CLASS	FACILITY TYPE	DESCRIPTION
Shared	Signed Route / Shared Roadway	<ul style="list-style-type: none"> • Signed routes or shared roadways are streets where cyclists and drivers share a travel lane • Indicated by wayfinding signage and/or pavement markings • Appropriate on local roads that are part of a cycling network
Designated	Bike Lane	<ul style="list-style-type: none"> • Bike lanes are lanes dedicated exclusively for use by cyclists through a combination of pavement markings and signage.
	Buffered Bike Lane	<ul style="list-style-type: none"> • Buffered bike lanes incorporate a painted buffer area to provide additional clearance and comfort between cyclists and vehicles
	Paved Shoulders	<ul style="list-style-type: none"> • In rural areas, a paved shoulder can provide dedicated space for cyclists where other improvements are not feasible
Separated	Protected Bike Lane	<ul style="list-style-type: none"> • Protected bike lanes are buffered bike lanes with the addition of some physical element in within the buffer – such as bollards, poured concrete or precast curbs, or parked cars
	Cycle Track	<ul style="list-style-type: none"> • Cycle tracks are cycling facilities located in the boulevard of a roadway – either at sidewalk height or mid-height between the roadway and sidewalk (separated by a curb)
	Multi-use Path / Trail	<ul style="list-style-type: none"> • Pathways located within a road boulevard that allow pedestrian and cyclists to share space • Where these facilities are located through green space, they are often referred to as multi-use trails

In selecting between the possible facility types and implementation strategies within each identified class, professional judgement was applied, considering the detailed evaluation factors (Step 2) of the OTM Book 18 Facility Selection Process. Network links were evaluated using a desktop review that considered a number of conditions relevant to identifying a cycling facility, including: urban or rural cross-section, surrounding land use, presence of on-street parking, roadway function, approximate pavement width, topography, physical constraints (such as water crossings) or narrow sections of right-of-way, available platform for rural roads with granular or partially paved shoulders, and frequency of driveways / intersection spacing.

For implementation strategies involving the reconfiguration of roadway lanes, a baseline check was used to identify potential candidates for road diets. Four lane roadways were identified as candidates for conversion – from four through lanes to two through lanes, a centre two-way left turn lane, and cycling facilities – only if they met the criteria of having an average daily volume of less than 20,000, based on future 2041 road volumes (to be conservative). The threshold daily volume of 20,000 is based on highly regarded sources including the US Federal Highway Administration (FHWA) publication *Road Diet Informational Guide* (2014). Nonetheless, the daily traffic volume indicator provides a high level screening only, and potential road diets should be subject to further evaluation before project implementation.

The following maps of the priority network are included in **Appendix A**:

- **Map 2** – Hub & Spoke Overview Map, including 5-km cycling distance
- **Map 3** – Priority Network Corridor Status, indicating whether the network link is new or included in the previous 2010 plan
- **Map 4** – Facility Types and Implementation Strategies for the Priority Network

A summary table of proposed implementation strategies for new corridors (beyond 2010 network) and previously identified links requiring an updated cycling facility type (based on facility class review) is attached in Appendix B.

3.4 Trans-Canada Trail Review

The City of Saint John implemented the Trans-Canada Trail route in 2016. At the time of implementation, much of the focus was on continuity and wayfinding signage in order to provide the connection. However, the need for a more comprehensive network and feasibility review was identified through this study.

In order to evaluate the corridor, the existing facility types were reviewed against the recommended class of facility, drawing on the OTM Book 18 facility selection tool. A similar feasibility review process was employed for Trans-Canada Trail segments noted for upgrades as for the priority corridor review process identified in Section 3.4.

The following maps related to the Trans-Canada Trail Review are included in **Appendix A**:

- **Map 5** This map depicts the current cycling facilities along each segment of the Trans-Canada Trail
- **Map 6** – This map depicts corridors that are recommended for upgraded cycling facilities based on 2016 roadway volumes / speeds
- **Map 7** – This map depicts corridors that are recommended for upgraded cycling facilities based on 2041 roadway volumes / speeds
- **Map 8**- This map depicts facility types and implementation strategies to address the recommended network upgrades

A summary table of potential upgrades is attached in **Appendix B**.

4 Programming Strategy

Providing a safe, efficient cycling network is just one component of getting more bikes on the road. A cycling programming strategy can provide the support, education, promotion and capacity building to help build and sustain a biking culture. The programs proposed in this section draws from transportation demand management (TDM) best practices. These practices have been shown to help reduce auto travel demand and VKT, increase utilization of existing cycling infrastructure, and help normalize cycling as a travel option.

This programming strategy is targeted at three segments of the population. These groups are not mutually exclusive, as different strategies will be relevant depending on the context:



Community-based initiatives are aimed at residents living within Saint John. These can target trips related to work, school, recreation, or errands. This is the broadest category of trips and includes a large number of discretionary trips that do not necessarily follow a regular schedule.



Workplace-based initiatives are aimed at large employers in Saint John, and targets trips to and from work. Work trips are optimal candidates for traveller behaviour changes. They tend to be made repeatedly between the same origin and destination over long periods of time, which helps to build a sense of regularity.



School-based initiatives are aimed at elementary, secondary, and post-secondary students. School trips tend to have many of the same characteristics as work trips. However, there are some key differences which make them distinct, such as variations in daily schedules (e.g. post-secondary students) and safety concerns (e.g. younger children).

4.1 Encouragement and Outreach

The City, employers and institutions all have a role in encouraging residents to ride by providing a variety of events, community activities and incentives. The actions below aim to inspire individuals who are interested in starting to cycle and helping encourage those that want to continue.

Action 1: Cycling Campaigns and Special Events

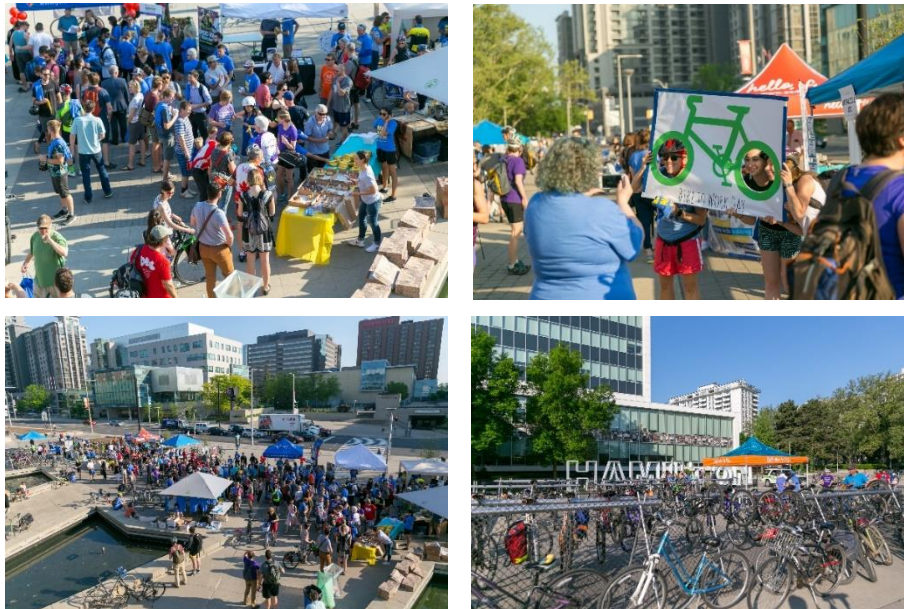
Large campaigns are a chance to showcase the benefits of cycling and to encourage casual and potential riders to bike more frequently. Experience has shown that broad cycling campaigns that change attitudes and behaviours gain the most traction when they are driven at the local and grassroots level. There are a number of long-established and emerging campaigns that are undertaken in communities small and large across Canada. These include:

- **Bike Month:** the event is held annually in Canada (June) and the US (May) and coincides with the start of the fair-weather cycling season.

In many communities, Bike Month is an overarching promotional campaign for a collection of events organized by community groups. This could include basic bike repair workshops held by a bike shop, group rides with an NGO, or bike drives held by a charity or non-profit. The resources required for a Bike Month Campaign typically includes graphic design and printing costs, partnerships with local organizations to plan and coordinate events, and a dedicated website. Many of the events discussed within this section could be held during Bike Month;

- **Bike to Work Day (B2WD):** B2WD tends to be the kickoff for Bike Month campaigns. This “first-time” experience can convert a proportion of commuters to become regular bicycle commuters. Previous research in the Denver area found that approximately 25 percent of new B2WD participants will continue to bicycle to work after the event each year. The events typically consist of a cycling reception at a prominent location on the way to work, such as City Hall. The reception typically include refreshments, a t-shirt, cycling-related booths, and a cycling rodeo for kids.

Exhibit 4.1: Bike to Work Day Morning Reception in a mid-sized Canadian City



Some employers and neighbourhood associations can also host smaller events. These smaller pop-ups may receive some support from the local municipality; and,




- **Walk/Bike to School Day:** these campaigns are targeted towards elementary and middle school students, and are typically held once in the fall, winter and spring terms. These campaigns aim to get students to walk and bike to school to counteract the increase in the number of children being driven to school. These are often led in collaboration with Public Health as part of a broader active

living/school travel planning program. Schools that participate can usually enter a draw to win a prize that supports the local school (e.g. money towards sports equipment). The City of Hamilton hosts “Wear Yellow Days”. The events promote safety and active travel, and schools can submit a creative photo to be entered into a random draw (Exhibit 4.2). Walk and Ride to School Wednesdays events are held in a number of communities including Toronto, Peel Region, Ottawa, Haldimand County and Niagara Region.

Exhibit 4.2: Sample photos of a ‘Wear Yellow and Walk to School Day’ campaign



Saint John should examine the feasibility of hosting large cycling campaigns. There may be opportunities to partner with community groups and local cycling shops to provide programming and cross-promotion. This would target all audiences and should be planned in the short-term.

#	Action	Timeline	Audience
1	Examine the feasibility and support for hosting cycling campaigns and special events.	<div style="width: 25%; background-color: #4CAF50; border: 1px solid #4CAF50;"></div>	  

Action 2: Community Group Bike Rides

Group bike rides can help spark interest in cycling, particularly for recreational users. Community group bike rides are a low-cost way to help residents become familiar with the cycling infrastructure available in their community and for residents in other areas of the municipality to explore a new neighbourhood. These low-effort, family-friendly rides follow a set path and are led by marshals that make sure no rider is left behind.

These types of community groups can be hosted and organized by different types of groups:

- Municipal-affiliated organizations:** The Mississauga Cycling Committee organizes Community Ward Rides every two weeks during the spring and summer. The free rides take place in all corners of the city and range between 5 and 20 kilometres. Rides start with a safety talk before participants split into groups based on speed, distance, and skill level. Volunteer marshals lead the groups at a leisurely pace followed by free refreshments. The program has become popular and is sponsored by a local business and the City.

This model can be found in other cities including Essex County and Sudbury;

- **Cycling organizations:** many cycling-focused organizations include community rides as part of their broader programming. These may or may not receive public support (in-kind and/or financial) and can be rotate through different parts of a city. Saint John Cycling has held these types of rides in the past; and,
- **Ride-only organizations:** The Hamilton Glow Riders is a grassroots initiative. From May to September, the group hosts nighttime group rides through different parts of Hamilton. Participants are encouraged to decorate their bikes using lights and glow sticks to create a colourful mass of riders. This group receives no support from the municipality but does sell shirts to raise funds to offset some costs. Outside of the rides, the group does not undertake any cycling programming. This type of model can be difficult to replicate as it depends on informal, grass-root volunteers who give their time purely out of passion.

The City should explore hosting community group rides or support existing ones. A partnership with Saint John Cycling, which already has experience organizing these types of rides, may prove to be an effective model to avoid duplicating efforts.

#	Action	Timeline	Audience
2	Investigate a preferred operating model for hosting regular community group bike rides.		

Action 3: Host Pop-Up Promotional Events

Pop-up events are temporary events in unexpected spaces. They pop up and, after a few hours, they disappear. The events take place where people already go, such as malls, festivals, downtown streets or other locations, as opposed to trying to attract people to them.

Saint John should develop a cycling pop-up promotional program that markets the cycling network, services and programs that are available to residents. This could be done through a partnership with a local community group or led by the City. Some municipalities, such as the Region of Peel, have found success in hiring summer students to fill this role. This action should be examined as the cycling network matures in the mid-term.



#	Action	Timeline	Audience
3	Host promotional pop-up events in locations with large amount of organic pedestrian traffic.		

Action 4: Investigate the Feasibility of Commuter Incentive/Disincentive Initiatives

Travel behaviours are influenced by the “rewards” and “costs” of travel. Collectively, these send price signals to travellers which can encourage them to shift modes to a more cost-effective option. These types of initiatives have a high impact on breaking auto-centric travel behaviours if the alternatives that exist are safe and practical. Initiatives under this may include:

- **Parking Cash-Out:** these programs attempt to remove the subsidy for driving experienced by commuters who choose not to drive to work or school, by reducing the benefit associated with free parking. In these schemes, the employer provides non-drivers with a cash equivalent to the value of free parking. This introduces an incentive to commuters to cycle or take another form of sustainable transportation;
- **Parking Fees:** in contrast to the parking cash-out, parking fees impose a cost to motorists to disincentivize driving. Saint John charges for parking within the downtown core, with monthly rates currently at or above the price of a monthly transit pass at most lots. The City should consider parking fees as a tool for managing auto travel demand to and from parking constrained areas, and to help support the use of sustainable modes, particularly cycling; and,
- **Commuter Rewards Programs:** a commuter rewards program incentivizes the use of sustainable modes of travel. For every trip that a staff member, student or resident makes using a sustainable mode, they can earn points towards entering draws or prizes. These programs are typically implemented within workplaces. The City could consider piloting this program with City staff.

The City should investigate the feasibility of implementing commute incentive/disincentive programs over the longer-term.

#	Action	Timeline	Audience
4	Investigate the feasibility of implementing a commuter incentive and disincentive initiatives to help influence travel behaviours.		


4.2 Educating Road Users

Saint John should promote safe cycling practices through public and targeted education activities for motorists, cyclists and other road users to “share the road”. Roadway safety is directly linked to understanding and adhering to traffic laws. These educational programs should be enhanced over time, by analyzing the program outcomes and drawing on the lessons learned from other jurisdictions.

Action 5: Conduct Safe Cycling and Driving Campaign



Bicycle safety campaigns help educate drivers and cyclists on a variety of issues. These issues can include how to share the road, how to pass cyclists

(i.e. Ellen’s Law), how to turn across bike lanes, and how to use/respond to other new cycling infrastructure (e.g. bike boxes, two-way cycle tracks). The development of bicycle safety educational materials is a step towards helping drivers and cyclists understand how to safely use and interact with bike infrastructure.

#	Action	Timeline	Audience
5	Conduct safety education campaigns targeted at both cyclists and drivers.		

Action 6: Support Cycling Education Programs


Education programs help existing, new and potential cyclists to become more familiar with the rules of the road and become comfortable using local infrastructure. These programs can take many forms depending on the audience. In schools, they can include bike rodeos where students learn proper riding techniques and get to apply their skills on an obstacle course. For workplaces, this can include lunch and learn sessions. In the community, this could be classes offered through the municipal recreation program or delivered through a local non-government organization. The City should support cycling education programs in the short-term.

#	Action	Timeline	Audience
6	Support cycling education programs.		

Action 7: Implement Positive Enforcement Events

Roadway enforcement initiatives tend to focus on what travellers are doing *wrong* as opposed to what they’re doing *right*. Positive campaigns reward cyclists who are seen demonstrating proper riding behaviour and have the required equipment (e.g. lights) by giving them a small reward. Incentives could include vouchers for local shops, City/police force trinkets or additional cycling equipment (e.g. bike seat cover). The campaigns typically coincide with the beginning of the spring cycling season. These can be led by local police, City staff or volunteers.

This is a program that the City should explore in the mid-term.

#	Action	Timeline	Audience
7	Implement a positive enforcement campaign.		

4.3 Promoting the Network and Mode

Providing information on how to navigate the cycling network is important to enable travellers to use it. As the local network expands and matures, having relevant information available to potential cyclists can help give them encouragement to try cycling for a variety of reasons. By promoting the information, both passively and actively, travellers can better understand its utility to them.

Action 8: Cycling trails and route map (online and in-print)



An official cycling routes and trails map provides a resource to plan cycling trips. Providing a map helps travellers identify where infrastructure is located, what type of infrastructure it is and where it goes. A printed version of the map can be used as a promotional asset at events and distributed through other channels. An online map helps to expand access to the information.

This action should be completed in the short-term.

#	Action	Timeline	Audience
8	Develop a print and digital cycling map.		



Action 9: Active Transportation Wayfinding and Signage Strategy

Wayfinding signage help cyclists and pedestrians navigate to major destination by directing them along roads and trails. They can indicate to cyclists that they are on a designated bikeway, make motorists aware of a cycling route and indicates when bike trails turn from one street to the next. Given that many pedestrians also use cycling routes (e.g. trails, multi-use paths), the strategy could be broadened to encompass all active travel modes. The City should develop a strategy in the short-term that can be implemented within the existing network and expanded as it grows.

#	Action	Timeline	Audience
9	Develop an active transportation wayfinding and signage strategy.		

Action 10: Personalized Trip Planning Support

Personalized trip planning support is an approach of targeting audiences that are in a position to likely change their travel behaviour. This includes relocating employees, students or residents. The personalized trip planning support provides customized information, training and incentives to support travellers to reclaim their commute. The City should consider offering this in the mid-term and target the services to all audience groups.

#	Action	Timeline	Audience
10	Offer personalized trip planning support for new cyclists.		

Action 11: Bike Valet at Major Events and Festivals

A bike valet works similar to a coat check – it offers a safe and free location to store a bike while attending major events and festivals. Patrons and event holders value bike valets because it satisfies a real need for safe, hassle-free parking that helps get people quickly into and out of their destination. This should be implemented in the mid-term, though it could be delivered earlier if parking demand issues arise at festivals and major events over the short-term.

#	Action	Timeline	Audience
11	Offer bike valet programs at major events and festivals.		

Action 12: Pilot a River Jumper Service to Overcome Natural Barriers

Crossing the Saint John River poses a significant barrier for cyclists. The crossings in the central area do not have cycling infrastructure and retrofitting the existing structures to accommodate it may be challenging. A quick-win option to overcome this is to implement a program similar to the City of Hamilton’s ‘Mountain Climber’ program.

Exhibit 4.3: Hamilton Mountain Climber Signage

In Hamilton’s situation, the Niagara Escarpment splits the City into two levels separated by a 100 metre height differential. There are a limited number of roads that cross the escarpment, and most have difficult grades (>10%). To improve access across the barrier, the City allows cyclists to load their bike onto an empty transit bike rack and travel between the last stop on one side and the first stop on the other side for free. Customized signs are installed at the designated bus stops



(Exhibit 4.3). The program was piloted in 2017 along one transit corridor, expanded to two other corridors in 2018 and was made a permanent program in 2019 with five additional routes added. Local transit staff estimate that the system lost approximately \$1,500 in fare revenue in 2018, or less than 0.004% of the total fares collected.

A similar program (i.e. the River Jumper) could be implemented in Saint John. The program could be piloted to allow free access on Routes 15A/B across the Saint John Harbour Bridge to improve connections between Lower West Side/West Saint John to the North End, Uptown and downtown. A similar service across the Reversing Falls Bridge may also be useful. City transportation staff should open discussions with Saint John Transit, community members and elected officials to determine if there is interest for such a program.

#	Action	Timeline	Audience
12	Determine support for a free River Jumper service.		

Action 13: Offer bike loans through the library system or a community organization

To promote equitable access to bicycles, some public libraries now allow members to borrow bikes in the same way they borrow books. This can help provide bicycles, even for a short period, to all residents. Different models allow individuals to use bikes from a few hours to a few weeks. In the Maritimes, the Annapolis Valley Regional Library system allows patrons to borrow bikes, which includes a helmet and lock. Some non-for profit organizations offer a similar program including the Markham Cycle Hub, Start the Cycle and the Crescent Valley Resource Centre.




Staff should investigate in the short-term if there is interest in this type of program and how to best implement it. There may be partnership opportunities with the Crescent Valley Resource Centre and other community organizations to support initiatives and programs already underway (e.g. the Trike Club).

#	Action	Timeline	Audience
13	Offer bike loans through the library system or a community organization.		

Action 14: Examine the Feasibility of a BikeShare System

Large urban centres have been the focus of bikeshare systems, however several small and mid-sized cities are looking at bringing these systems to their communities. The recent trend towards privately financed and operated systems has lowered the barrier to entry. Smaller cities, such as Kingston and Kelowna, have launched systems following the public-private model. These include dock-based systems (e.g. the bike must be parked at station), dockless systems (e.g. the bike can be parked anywhere), and hybrid systems (e.g. bikes can be parked at a dedicated station or anywhere for a small fee). Two Canadian markets, Montreal and Hamilton, are in the process of launching electric-assist bikes which provide riders with an extra boost when travelling up difficult terrain, such as hills.

Exhibit 4.4: Types of BikeShare Systems Operating in Canada

Docked Bike System	Dockless System	Hybrid System
		
Ex: Toronto, Montreal (BIXI)	Ex: Kingston (DropBike), Kelowna (DropBike)	Ex: Hamilton (SoBi), Montreal (Jump)

The City should undertake a BikeShare Feasibility Study to evaluate the viability of a bikeshare system, review possible technology options, determine financial

implications (if any), explore various governance models, and identify a desirable partnership plan.

#	Action	Timeline	Audience
14	Examine the Feasibility of a BikeShare System.		



4.4 Capacity Building and Partnerships

Capacity building can be defined as enhancing the potential of stakeholders to accomplish collective goals. Strong partnerships with local stakeholders can help Saint John create a dialogue to better understand the objectives, plans and support available to deliver many of the actions outlined in this strategy. This can include engaging private and public sector partners, identifying advocacy and cycling community champions, and creating forums to generate feedback from residents and experts from other communities.

Action 15: Explore the interest for School Travel Planning

School Travel Planning (STP) is a community-based approach to encouraging active transportation among children and youth. It assists partners – including school boards, principals, parents, students, public health, municipal transportation staff and police forces – in developing active transportation plans to help children and youth safely walk and wheel in their communities.

As partners come together, they can collectively work to overcome real and perceived barriers to cycling and walking to school. This can include regulatory and enforcement changes in school zones, programs like walking school buses, or adjusting school start/end times to align with bus schedules. Various frameworks for STP have been adopted in Nova Scotia, Ontario, Quebec, Manitoba, Alberta and Saskatchewan and have increased the rate of students cycling and walking to school. City staff should open discussion with the school boards and public health to investigate if a school travel planning program would be beneficial in Saint John.

#	Action	Timeline	Audience
15	Explore if a school travel planning program would be beneficial.		



Action 16: Implement a Municipal Cycling Advisory Committee

A municipal cycling advisory committee offers a source of input for decision makers on issues related to cycling projects, programs and policies. A committee can be a soundboard and internal advocate for helping to develop a cycling culture and provide transparency into how projects are advancing, and can be a step toward normalizing cycling accommodation within transportation projects. A list of activities that a cycling advisory committee typically do and do not engage in are listed in Exhibit 4.5.

Exhibit 4.5: Typical Role of a Cycling Advisory Committee (from the League of American Bicyclists)

Typical Activities	Activities That Should Be Avoided
<ul style="list-style-type: none"> • Act as a check for elected officials and staff • Expect presentations and chances to give input to agency staff on major projects (e.g. bridges, street repaving, comprehensive plan) • Provide constructive guidance on bicycle issues • Ensure residents have an opportunity to give input and receive a response 	<ul style="list-style-type: none"> • Endorsing candidates or any political involvement • Narrowly focusing on members' pet causes • Losing sight of the big picture

City staff should work on developing a terms of reference for the committee in the short-term. There may be an opportunity to make other cycling community groups and businesses ex-officio, non-voting members of the group (e.g. bike stores, NGOs, advocacy groups).

#	Action	Timeline	Audience
16	Implement a municipal cycling advisory committee.		

Action 17: Host a Community Cycling Transportation Summit

A Cycling Transportation Summit provides a connection to the community to develop a cohesive vision for cycling in Saint John and determine what actions need to be done to realize the vision. Summits bring together City staff, community groups, residents, and businesses to hear from leading experts and discuss cycling-related matters in a series of workshops and breakout sessions. These summits can be a one-time events or hosted on a regular basis (e.g. biannually) to monitor progress and redefine the action plan.

#	Action	Timeline	Audience
17	Host a Community Cycling Transportation Summit.		

4.5 Summary of Programming Recommendations

The recommended programming plan is summarized in Exhibit 4.6.

Exhibit 4.6: Summary of Recommended Programming Actions

#	Action	Timeline	Audience
Encouragement and Outreach			
1	Examine the feasibility and support for hosting cycling campaigns and special events.		
2	Investigate a preferred operating model for hosting regular community group bike rides.		
3	Host promotional pop-up events in locations with large amount of organic pedestrian traffic.		
4	Investigate the feasibility of implementing a commuter incentive and disincentive initiatives to help influence travel behaviours.		
Educating Road Users			
5	Conduct safety education campaigns targeted at cyclists and drivers.		
6	Support cycling education programs.		
7	Implement a positive enforcement campaign.		
Promoting the Network			
8	Develop a print and digital cycling map.		
9	Develop an active transportation wayfinding and signage strategy.		
10	Offer personalized trip planning support for new cyclists.		
11	Offer bike valet programs at major events and festivals		
12	Determine support for a River Jumper service.		
13	Offer bike loans through the library system or a community organization.		
14	Examine the Feasibility of a BikeShare System.		
Capacity Building			
15	Explore if a school travel planning program would be beneficial.		
16	Implement a municipal cycling advisory committee.		
17	Host a Community Cycling Transportation Summit.		

Timeline
 Short-term
 Mid-term
 Long-term

Audience
 Community
 Workplace
 Schools

Appendix A –Network Mapping

Map 1 – Cycling Impact Analysis Results

Map 2 – Priority Network “Hub & Spoke” System

Map 3 – Priority Network Corridor Status

Map 4 – Priority Network Facility Types & Implementation Strategy

Map 5 – Trans-Canada Trail – Existing Facility Types

Map 6 – Trans-Canada Trail – Facility Upgrade Review (2016)

Map 7 – Trans-Canada Trail – Facility Upgrade Review (2041)

Map 8 – Trans-Canada Trail – Facility Upgrade Proposed
Implementation Strategy

Appendix B – Implementation Tables

Implementation Strategies – Priority Network

Implementation Strategies – Trans Canada Trail

Priority Network Implementation Strategies (New/Upgraded Links Only)

Full Name	From	To	Previous Plan?	2041 Volume	Speed	Class	Road Class	Urban / Rural	Facility Type	Feasibility Notes	Length (KM)
Ragged Point Road	Woodward Avenue	Ragged Point Road	Y	0	0	N/A	Local	Urban West, Rural East	Bike Lanes	Stripe bike lanes to existing wide road. AADT and speed data assumed, to be confirmed prior to implementation	0.58
Main Street	Douglas Avenue	Bridge	N	12915	60	Separated	Collector	Urban	Protected Bike Lanes	Retrofit protected bike lanes; median in centre of road, but should be enough width for 3 lanes and protected facility	0.68
Westmorland Road	Thorne Avenue	St Joseph Road	N	8495	50	Designated	Local	Rural North, Urban South	Bike Lanes	Stripe bike lanes; sections of rural cross section on north side; edge-lines present in some sections	1.88
Crown Street	Union Street	Thorne Avenue	Y	14060	60	Separated	Local	Urban	Protected Bike Lanes	Existing two-way centre turn lane, add protected bike lane through existing lane reduction and reconfiguration; median at Crown and Hay Market Square	0.86
Victoria Street	Bridge Street	Albert Street	N	480	30	Shared	Local	Urban	Shared Facility	Signed and marked quiet street route. Shared facility appropriate.	0.29
Wellesley Avenue, Cranston Avenue, Fifth Street, Parks Street, Mount Pleasant Avenue	Somerset Street	Arrow Walk Road	N	1485	40	Shared	Local	Urban	Shared Facility	Signed and marked quiet street route. Shared facility appropriate.	1.44
Somerset Street	Churchill Boulevard	Thornbrough Street	Y	13145	60	Separated	Local	Urban	Cycle-Track	Insufficient width for protected facility, upgrade to cycle track with reconstruction or consider alternate route	0.44
Millidge Avenue	Spar Cove Road	Visart Street	N	4032	40	Designated	Local	Urban	Bike Lanes	Stripe bike lanes to existing wide lanes	0.83
Watson Street, Suffolk Street, Digby Ferry Road	Riverview Drive	End of Digby Ferry Road	N	110	30	Shared	Local	Urban	Bike Lanes	Stripe bike lanes to existing wide lanes; may require parking restrictions	1.72
Somerset Street	Magazine Street	Thornborough Street	N	15785	60	Separated	Local	Urban	Cycle-Track	Insufficient width for protected facility, upgrade to cycle track with reconstruction or consider alternate route	0.74
Magazine Street	Somerset Street	Metcalf Street	N	28	40	Shared	Local	Urban	Bike Lanes	Stripe bike lanes to existing wide lanes; median at Magazine and Metcalf	0.59
Trail	Trans-Canada Trail	Trans-Canada Trail	N	0	0	Separated Facility	NA	NA	Proposed Separated Facility	Proposed Separated Facility	0.83
Charlotte Street	Broad Street	Union Street	N	7075	50	Designated	Local	Urban	Bike Lanes	Stripe bike lanes; parking impacts - existing metered parking	0.99
Sydney Street	Union Street	South of Vulcan Street	N	3258	40	Shared	Local	Urban	Bike Lanes	Stripe bike lanes to existing wide lanes; may require parking restrictions	1.29
Albert Street, Main Street, Trail	Newman Street	South of Main Street	N	968	30	Shared	Local	Urban	Bike Lanes	Stripe bike lanes to existing wide lanes; may require parking restrictions	0.33
Newman Street	Albert Street	Adelaide Street	N	1652	30	Shared	Local	Urban	Bike Lanes	Stripe bike lanes to existing wide lanes; may require parking restrictions	0.35
Thorne Avenue	Seaton Street	Westmorland Road	Y	18892	60	Separated	Local	Urban	Cycle-Track	Insufficient width for protected facility, upgrade to cycle track with reconstruction or consider alternate route; road widens to 6 lanes at Bayside Dr., crosses rail corridor	0.83
Trail	Spar Cove Road	Adelaide Street	N	0	0	Separated Facility	NA	NA	Proposed Separated Facility	Proposed Separated Facility	0.60
Albert Street	Newman Street	Trail	N	0	0	N/A	Local	Urban	Shared Facility	Signed and marked quiet street route. Shared facility assumed to be appropriate - confirm AADT and speed data prior to implementation	0.13
Somerset Street	Somerset Street	Samuel Davis Drive	Y	14750	60	Separated	Local	Urban	Protected Bike Lanes	Existing bike lanes - add buffer protection through narrowing of wide lanes	0.55
Somerset Street	Millidge Avenue	Somerset Street	Y	13680	60	Separated	Local	Rural North, Urban South	Protected Bike Lanes	Existing bike lanes - add buffer protection through narrowing of wide lanes; median islands present at Somerset and Millidge	0.60

Full Name	From	To	Previous Plan?	2041 Volume	Speed	Class	Road Class	Urban / Rural	Facility Type	Feasibility Notes	Length (KM)
Wellesley Avenue	Somerset Street	Gorman Avenue	N	4510	40	Designated	Local	Urban	Bike Lanes	Stripe bike lanes to existing wide lanes; may require intersection reconfiguration at Somerset - left turn lane present	0.18
Trail	Trans-Canada Trail	Hilyard Street	N	0	0	Separated Facility	NA	NA	Existing Separated Facility	Existing separated facility	0.24
Trail	Albert Street	Trail	N	0	0	Separated Facility	NA	NA	Existing Separated Facility	Existing separated facility	0.08
City Road	Stanley Street	Brinley Street	Y	15185	60	Separated	Collector	Urban	Cycle-Track	Insufficient width for protected facility, upgrade to cycle track with reconstruction or consider alternate route	0.38
City Road	Brinley Street	Thorne Avenue	Y	27352	60	Separated	Collector	Urban	Cycle-Track	Busy road with centre median and Insufficient width for protected facility, upgrade to cycle track with reconstruction or consider alternate route	0.36
Main Street	Bridge	Union Street	N	14132	60	Separated	Collector	Urban	Cycle-Track	Bridge crossing St. John Throughway	0.56
Simonds Street	Magazine Street	Hilyard Street	N	2602	40	Shared	Local	Urban	Bike Lanes	Existing bike lanes	0.29
Visart Street	Churchill Boulevard	Beaverbrook Avenue	N	10415	50	Designated	Local	Urban	Bike Lanes	Retrofit bike lanes to existing wide road; will require some lane reconfiguration, presence of turn lane	0.29
Wellesley Terrace	Beaverbrook Avenue	Gorman Avenue	N	0	30	Shared	Local	Urban	Shared Facility	Signed and marked quiet street route. Shared facility appropriate.	0.14
Westmorland Road	St Joseph Road	Mcallister Drive	N	8662	50	Designated	Local	Rural North, Urban South	Buffered Bike Lanes	Protected bike lane through road diet opportunity	1.38

Trans-Canada Trail Implementation Strategies

ID	Full Name	From	To	Road Class	Pavement Width	2041 Volume	Speed	Road Type	Class	Existing Facility Type	Meets Class?	Upgraded Facility Type	Feasibility Notes	Length (KM)
1	Westfield Road	City Limit	Ketepec Road	Collector/Local	7.8	4585	70	Rural	Designated	Shared Lanes	N	Paved Shoulders	Provide paved shoulders (mill and overlay into existing asphalt, and extend paved shoulder on existing granular base)	4.7
2	Westfield Road	Ketepec Road	Dalton Lane	Local	10.1	4585	50	Urban	Designated	Bike Lanes	Y	Bike Lanes	Current facility is adequate	1.1
3	Westfield Road	Dalton Lane	Bay Street	Local	8.0	4585	50	Rural	Designated	Shared Lanes	N	Paved Shoulders	Provide paved shoulders (mill and overlay into existing asphalt, and extend paved shoulder on existing granular base)	3.0
4	Bay Street (entire)	(entire)	(entire)	Local	8.3	6632	50	Rural	Designated	Shared Lanes	N	Paved Shoulders	Provide paved shoulders (mill and overlay into existing asphalt, and extend paved shoulder on existing granular base)	1.3
5	Manchester Avenue	Bay Street	Dever Road	Local	9.8	7158	50	Urban	Designated	Shared Lanes	N	Bike Lanes	Stripe narrow bike lanes to existing wide lanes	0.4
6	Manchester Avenue	Dever Road	Manawagonish Road	Local	9.3	6495	50	Urban	Designated	Shared Lanes	N	Bike Lanes	TCT Route Details indicates bike lanes, StreetView shows shared use lanes existing. Stripe bike lanes to existing wide lanes.	0.8
7	Manawagonish Road	Manchester Avenue	Main Street West	Local	9.9	3755	40	Urban	Shared	Shared Lane EB, Bike Lane WB	Y	Bike Lanes	Current facility is adequate, however desirable to stripe bike lanes in both directions (access to several schools along the corridor) & consistency with Segment 6. Note that any current on-street parking would be restricted to achieve bike lanes in both directions. Feasibility of parking removal to be reviewed further.	1.3
8	Main Street West (entire)	(entire)	(entire)	Collector	14.4	12518	60	Urban	Separated	Shared Lanes	N	Cycle Track / Protected Bike Lane	Retrofit protected bike lanes through lane narrowing / lane reconfiguration. Current on-street parking would likely need to be consolidated to one side only. Parking consolidation requires further review.	0.6
9	Bridge Road (entire)	(entire)	(entire)	Collector	16.0	17915	60	Urban	Separated	Shared Lanes	N	Cycle Track / Protected Bike Lane	Bridge constraint; Consider lane reconfiguration from Lancaster Avenue to Bentley Street; Requires coordination with the province.	0.7
10	Chesley Drive	Bridge Road	Bentley Street	Collector	14.6	14428	60	Urban	Separated	Shared Lane (eastbound)	N	Cycle Track / Protected Bike Lane	Consider retrofitting an EB protected bike lane through lane narrowing to connect to Harbour Passage Trail	1.1

ID	Full Name	From	To	Road Class	Pavement Width	2041 Volume	Speed	Road Type	Class	Existing Facility Type	Meets Class?	Upgraded Facility Type	Feasibility Notes	Length (KM)
11	Douglas Avenue	Chesley Drive	Bentley Street	Local	13.0	3498	40	Urban	Shared	Bike Lane (westbound)	Y	Bike Lane (westbound)	Current facility is adequate	1.1
12	Bentley Street (entire)	(entire)	(entire)	Local	10.0	0	30	Urban	Shared	Bike Lane (northbound)	Y	Bike Lane (northbound)	Current facility is adequate	0.3
13	Harbour Passage	Bentley Street	Station Street	Existing Separated Facility	NA	NA	NA	NA	Existing Separated Facility	Existing Separated Facility	NA	Existing Separated Facility	N/A	1.4
14	Station Street (entire)	(entire)	(entire)	Collector	15.3	5968	60	Urban	Designated	Shared Lanes	N	Bike Lanes	Road diet and/or lane narrowing to accomodate bike lanes	0.7
15	City Road	Station Street	Stanley Street	Collector	14.5	15185	60	Urban	Separated	Shared Lanes	N	CycleTrack / Protected Bike Lane	Road diet (4 to 3) to accommodate protected bike lanes or widen to provide cycle tracks in the future	0.3
16	Stanley Street	City Road	pedestrian bridge	Local	8.5	1938	30	Urban	Shared	Shared Lanes	Y	Shared Lanes	Current facility is adequate; Suggest upgraded wayfinding through signage and sharrows	0.0
17	Highway 1 Pedestrian Bridge	Stanley Street	Stanley Street	Existing Separated Facility	NA	NA	NA	NA	Existing Separated Facility	Existing Separated Facility	NA	Existing Separated Facility	N/A	0.2
18	Stanley Street	pedestrian bridge	Wright Street	Local	8.7	1938	30	Urban	Shared	Shared Lanes	Y	Shared Lanes	Current facility is adequate; Suggest improved wayfinding through signage and sharrows	0.1
19	Wright Street	Stanley Street	Gooderich Street	Local	11.0	1448	30	Urban	Shared	Shared Lanes	Y	Shared Lanes	Current facility is adequate; Suggest improved wayfinding through signage and sharrows	0.2
20	Gooderich Street	Wright Street	Mount Pleasant Avenue	Local	8.0	998	30	Urban	Shared	Shared Lanes	Y	Shared Lanes	Current facility is adequate; Suggest improved wayfinding through signage and sharrows	0.3
20	Gooderich Street	Wright Street	Mount Pleasant Avenue	Existing Separated Facility	NA	NA	NA	NA	Existing Separated Facility	Existing Separated Facility	NA	Existing Separated Facility	Current facility is adequate; Some upgrades needed to ensure accessibility & comfort (markings at intersections & driveways, curb cuts, etc.)	0.2
21	Mount Pleasant Avenue	Gooderich Street	ArrowWalk Road		11.7	545	40	Urban	Shared	Existing Separated Facility	Y	Existing Separated Facility	Current facility is adequate; Some upgrades needed to ensure accessibility & comfort (markings at intersections & driveways, curb cuts, etc.)	0.2
22	Rockwood Park	Rockwood Park	Rockwood Park	Existing Separated Facility	NA	NA	NA	NA	Existing Separated Facility	Existing Separated Facility	NA	Existing Separated Facility	Current facility is adequate; Some upgrades needed to ensure accessibility & comfort (markings at intersections & driveways, curb cuts, etc.)	4.3

ID	Full Name	From	To	Road Class	Pavement Width	2041 Volume	Speed	Road Type	Class	Existing Facility Type	Meets Class?	Upgraded Facility Type	Feasibility Notes	Length (KM)
23	Ashburn Road (entire)	(entire)	(entire)	Local	6.3	5028	40	Rural	Designated	Shared Lanes	N	Paved Shoulders	Provide paved shoulders (mill and overlay into existing asphalt, and extend paved shoulder on existing granular base)	2.2
24	Rothesay Road	Ashburn Road	Brookville entrance	Collector	7.5	14640	60	Rural	Separated	Shared Lanes	N	Paved Shoulders	Provide paved shoulders when road is resurfaced (narrow/no existing shoulders)	1.1
25	Rothesay Road	Brookville entrance	west entrance to K-Park	Collector	9.9	14640	60	Urban	Separated	Bike Lanes	N	Cycle Track / Protected Bike Lane	Existing bike lanes can be upgraded by introducing painted buffer and separators, and/or lowering operating speeds to 50 km/hr	1.0
26	Rothesay Road	west to east entrance to K-Park	west to east entrance to K-Park	Local	9.4	14640	60	Urban	Separated	Shared Lanes	N	Cycle Track / Protected Bike Lane	Existing bike lanes can be upgraded by introducing painted buffer and separators, and/or lowering operating speeds to 50 km/hr	0.2
27	Rothesay Road	east entrance to K-Park	City Limit	Local	9.3	16015	60	Urban	Separated	Bike Lanes	N	Cycle Track / Protected Bike Lane	Existing bike lanes can be upgraded by introducing painted buffer and separators, and/or lowering operating speeds to 50 km/hr	0.2